LIST OF REQUIRED MACHINERY AND EQUIPMENT

	LIST of REQUIRED MACHINERY and EQUIPMENT								
MODEL DESIGN ITEM No.	QTY	DESCRIPTION	SIZE	MANUFACTURER	MODEL	SPEC SECT.	PROVIDED BY	REMARKS	
11	2	CPP DRAIN TANK UNIT				57/78	CONTRACTOR	PSI Contactor Design & Shipyard construction per Sub Sect. 57.4.1 & TABLE 78-1	
12	2	CPP HUB OIL PUMP				57/78	CONTRACTOR	PSI Contactor Design & Shipyard provide per Sub Sect. 53.11	
13	2	STERN TUBE BEARING LO UNIT				53/78	CONTRACTOR	Includes tank, pump, filter, & accessories PSI Contactor Design & Shipyard construction per Sub Sect. 53.8	
14	1	FO TRANSFER PUMP				56	CONTRACTOR		
15	1	FO TRANSFER MANIFOLD				56	CONTRACTOR	Modular casting type (space reduction)	
16	1	FO PURIFIER SKID ASSEMBLY				56	CONTRACTOR	W/sludge tank, pumps, & accessories	
17	2	FIRE PUMP SUCTION STRAINER				58	CONTRACTOR		
19	2	PROPULSION ENGINE FW EXPANSION TANK				59	CONTRACTOR		
20	2	BILGE PUMP				58	CONTRACTOR		
21	1	BILGE MANIFOLD No. 1				58	CONTRACTOR	Modular casting type (space reduction)	
22	1	BILGE MANIFOLD No. 2				58	CONTRACTOR	Modular casting type (space reduction)	
23	2	FIRE & SPRINKLING PUMP				58	CONTRACTOR		
24	2	SEACHEST ASSEMBLY				58	CONTRACTOR	Includes valves, strainer, blow down, and air escape	
25	1	DELUGE SPRINKLING MANIFOLD, VEHICLE DECKS				58	CONTRACTOR	Modular casting type (space reduction)	
26	2	JACKET WATER TRANSFER PUMP				59	CONTRACTOR		
27	4	AUXILIARY COOLING WATER PUMP				59	CONTRACTOR	Serves Reduction Gear, CPP, EOS A/C, SSDG, charge air, and propulsion engine charge air equipment	
30	2	AUXILIARY COOLING WATER EXPANSION TANK				59	CONTRACTOR		
31	2	POTABLE WATER PUMP				59	CONTRACTOR		
32	1	POTABLE WATER PHEUMATIC-PRESSURE TANK				59	CONTRACTOR		

	LIST of REQUIRED MACHINERY and EQUIPMENT								
MODEL DESIGN ITEM No.	QTY	DESCRIPTION	SIZE	MANUFACTURER	MODEL	SPEC SECT.	PROVIDED BY	REMARKS	
33	2	POTABLE WATER HEATER (ELECTRIC)				59	CONTRACTOR		
34	2	HOT POTABLE WATER CIRCULATING PUMP				59	CONTRACTOR		
35	1	OIL-FIRED HOT WATER HEATER				59	CONTRACTOR	Skid-assembly w/ all accessories	
36	1	STANDBY ELECTRIC HOT WATER HEATER				59	CONTRACTOR	Skid-assembly w/ all accessories	
37	2	HOT WATER HEATING CIRCULATING PUMP				61	CONTRACTOR		
38	2	SEWAGE TRANSFER PUMP				70	CONTRACTOR		
39	1	SEWAGE LIFT TANK STATION				70	CONTRACTOR	W/ tank, non-clog pump & controller sized for engineering space services	
40	1	FRESH WATER BACK-FLUSH PUMP				70	CONTRACTOR		
41	2	SEWAGE TANK EXHAUST FAN				70	CONTRACTOR	Locate above sewage tank top	
42	1	USED OIL & OILY WATER TRANSFER PUMP				70	CONTRACTOR		
43	2	HOT WATER HEATING MANIFOLD				59	CONTRACTOR		
44	2	CONTROL AIR DRYER				72	CONTRACTOR		
45	2	AIR COMPRESSOR				72	CONTRACTOR		
46	1	SHIP SERVICE AIR RECEIVER				72	CONTRACTOR		
47	2	STARTING AIR RECEIVER				72	CONTRACTOR		
48	1	CONTROL AIR RECEIVER				72	CONTRACTOR		
49	4	CPP HYDRAULIC POWER UNIT				53	CONTRACTOR		
51	1	FUEL OIL FILTER				56	CONTRACTOR		
52	1	MOTOR CONTROL CENTER No. 5				90	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN	
53	1	MOTOR CONTROL CENTER No. 4				90	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN	
54	1	MOTOR CONTROL CENTER No. 3				90	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN	

LIST of REQUIRED MACHINERY and EQUIPMENT								
MODEL DESIGN ITEM No.	QTY	DESCRIPTION	SIZE	MANUFACTURER	MODEL	SPEC SECT.	PROVIDED BY	REMARKS
55	1	MOTOR CONTROL CENTER No. 6				90	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN
56	1	ENGINEER'S CONTROL CONSOLE				99	CONTRACTOR	
57	1	MAIN SWITCHBOARD				99	CONTRACTOR	
58	2	CPP OIL HEAD TANK				57/78	CONTRACTOR	Locate in Lower Vehicle Deck Casing 4 feet above deck adjacent to Item No. 66 PSI Contactor Design & Shipyard construction per Sub Sect. 57.4.1 & TABLE 78-1
59	1	OILY WATER SEPARATOR				58	CONTRACTOR	
60	1	FILTER CRUSHER				80	CONTRACTOR	
61	1	HI-FOG WATER MIST FEED PUMP				13	CONTRACTOR	
64	1	GRAYWATER LIFT TANK STATION ASSEMBLY				70	CONTRACTOR	w/ tank, non-clog pump & controller sized same as Item No. 39
65	1	PURIFIER WORK BENCH				80	CONTRACTOR	
66	2	STERN TUBE BEARING LO HEAD TANK				53/78	CONTRACTOR	Locate in Lower Vehicle Deck Casing 4 feet above deck PSI Contactor Design & Shipyard construction per Sub Sect. 53.8 & TABLE 78-1
67	2	PROPULSION ENGINE JW WASTE HEAT EXCHANGER				61	CONTRACTOR	Plate type
68	1	BILGE STRIPPING PUMP				58	CONTRACTOR	
69	2	SSDG LO STORAGE TANK				57	CONTRACTOR	Independent tank
70	12	MISC FLUID STORAGE TANK				78	CONTRACTOR	Independent tank
71	2	BILGE PUMP SUCTION STRAINER				59	CONTRACTOR	
72	1	SEWAGE TANK ROOM WORKBENCH W/ DEEP SINK				20/80	CONTRACTOR	
73	3	SSDG SCAC HEAT EXCHANGER				59	CONTRACTOR	Plate type
74	1	POTABLE WATER HEATER				61	CONTRACTOR	Plate type heat exchanger w/ air gap for heat recovery

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MODEL DESIGN ITEM No.	QTY	DESCRIPTION	SIZE	MANUFACTURER	MODEL	SPEC SECT.	PROVIDED BY	REMARKS
75	1	A/C UNIT				65	CONTRACTOR	Water cooled, serves engineering spaces
76	2	PROPULSION ENGINE SCAC HEAT EXCHANGER				59	CONTRACTOR	Plate type
77	4	PROPULSION ENGINE CHARGE AIR COOLING PUMP				59	CONTRACTOR	
78	2	PROPULSION ENGINE LUBE OIL STORAGE TANK				57	CONTRACTOR	Structural tank
79	2	REDUCTION GEAR LUBE OIL STORAGE TANK				78	CONTRACTOR	Structural tank
80	2	CPP LUBE OIL STORAGE TANK				78	CONTRACTOR	Structural tank
81	2	USED OIL TANK				57	CONTRACTOR	Independent tank
82	2	OILY WATER HOLDING TANK				58	CONTRACTOR	Independent tank
83	2	JACKET WATER HOLDING TANK				59	CONTRACTOR	Independent tank
84	1	HI FOG WATER MIST SYSTEM/BACK- FLUSH FRESH WATER STORAGE TANK				70/78	CONTRACTOR	Structural tank
85	1	TYPICAL MONORAIL BEAM				53	CONTRACTOR	w/ motorized trolley w/ hoist winch & brake
86	1	PARTS TRANSFER JIB CRANE				53	CONTRACTOR	w/ motorized hoist winch & brake
87	1	PARTS WASHER				80	CONTRACTOR	
88	2	SEMI-PORTABLE FIRE EXTINGUISHING FOAM HOSE REEL				13	CONTRACTOR	
89	1	END NO. 1 FIRE PUMP SUCTION MANIFOLD				58	CONTRACTOR	
90	1	END NO. 2 FIRE PUMP SUCTION MANIFOLD				58	CONTRACTOR	
91	1	END NO. 1 FIRE PUMP DISCHARGE MANIFOLD				58	CONTRACTOR	
92	1	END NO. 2 FIRE PUMP DISCHARGE MANIFOLD				58	CONTRACTOR	
94	1	EMERGENCY SWITCHBOARD				89	CONTRACTOR	
97	1	CHARGER, BATTERY, STARTING, EMERGENCY DIESEL GEN SET				96	CONTRACTOR	

	LIST of REQUIRED MACHINERY and EQUIPMENT								
MODEL DESIGN ITEM No.	QTY	DESCRIPTION	SIZE	MANUFACTURER	MODEL	SPEC SECT.	PROVIDED BY	REMARKS	
98	1	TELEPHONE ACOUSTIC BOOTH				95	CONTRACTOR		
99	2	STEERING GEAR AUXILIARY TANK				81	CONTRACTOR		
100	1	TANK, FUEL OIL, EMERGENCY GENERATOR ROOM				78	CONTRACTOR		
102	1	BATTERY BOX, EMERGENCY DIESEL GENERATOR SET STARTING				96	CONTRACTOR		
103	1	CONTROLLER, PRELUBE PUMP				90	CONTRACTOR		
105	3	TRANSFORMER, 480/208Y/120 Vac				90	CONTRACTOR	Shipyard provides & installs per Sub Sect. 90.7	
106	1	EOS A/C INPORT COOLING PUMP				59/65	CONTRACTOR	Shipyard provides & installs per Sub Sect. 59.8.4 & 65.4	
107	1	HI FOG WATER MIST SYSTEM PUMP UNIT				13	CONTRACTOR		
108	2	SEWAGE TANK AERATION BLOWER				11	CONTRACTOR		
109	2	STEERING GEAR				81	CONTRACTOR		
110	2	RUDDER				2	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN	
111	1	EMERGENCY MOTOR CONTROL CENTER No. 1				90	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN	
112	1	EMERGENCY MOTOR CONTROL CENTER No. 2				90	CONTRACTOR	Info on One Line Diagram in VOLUME V - OWNER'S MODEL DESIGN	

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